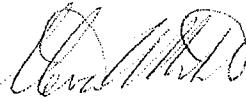


The schedule of sampling and analysis shall be given in Table 1.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data established in Regional Board Order No. 90-016.
2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.



Steven R. Ritchie  
Executive Officer

Effective Date: January 17, 1990

Attachments: Table 1

TABLE 1  
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

SAMPLING STATION >>	monitoring wells 1 through N
TYPE OF SAMPLE	G
Flow Rate (gal/day)	Q
pH (units)	Q
Temperature (deg. C)	Q
EPA 8010 for: purgeable priority pollutants	Q
GC/MS Scan(EPA 8240)	1/Y*
Water Level	Q

LEGEND FOR TABLE 1

G = grab sample

Q = quarterly, January-March, April-June, July-September, October-December

1/Y = once per year

N = most recently constructed monitoring well

\* EPA 8010 not required for quarter when EPA 8240 is performed.  
EPA 8240 shall be performed with open scan.

# **EXHIBIT D.2**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 95-222

REVISING SITE CLEANUP REQUIREMENTS FOR:

**ADVALLOY, INC.**  
and  
**EAST CHARLESTON, INC.**

for the property located at

**844 EAST CHARLESTON ROAD  
PALO ALTO  
SANTA CLARA COUNTY**

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter the Board), finds that:

1. **Site Location:** The site is located at 844 East Charleston Road in Palo Alto. The site is bounded by Charleston Road to the north, Fabian Way to the south, and existing structures to the east and west. Areas surrounding the building are paved. Adjacent properties are developed for commercial and light industrial use.
2. **Site History:** The one building occupying the site was constructed in 1958. Advalloy leased the site in 1968 and purchased the property in 1971. Previous activities involved precision metal stamping for the semi-conductor industry. These activities required the use of chemical such as degreasers, paint thinners, acids, and detergents; and generated a variety of hazardous wastes. As a result of groundwater investigations by a downgradient site in 1987, volatile organic compounds (VOCs) were detected in soil and shallow groundwater at the site.
3. **Named Dischargers:** Advalloy, as the previous owner and operator of the site, is named as a discharger. There is evidence that Advalloy used and released VOCs. East Charleston, Inc., the current owner of the site, is also named as a discharger. If additional information is submitted indicating that other parties caused or permitted any waste to be discharged on the site where it entered or could have entered waters of the State, the Board will consider adding that party's name to this Order.
4. **Site Hydrogeology:** The land surface is relatively flat, sloping gently north-northeast toward San Francisco Bay. The site is located on a series of overlapping alluvial fans deposited by east-flowing streams descending from the Santa Cruz Mountains. The regional groundwater gradient is northeast towards San Francisco Bay. A shallow water bearing zone exists

approximately ten feet below ground surface. The location and character of the deeper water bearing zones beneath the site are poorly understood.

5. **Remedial Investigation:** The principal VOC at the site is trichloroethylene (TCE) (up to 7,000 ppb in soil and 7,600 ppb in groundwater). Dichloroethylene (DCE) has also been detected onsite (up to 630 ppb in soil and 3,800 ppb in groundwater). Other VOCs detected at the site include 1,1,1-trichloroethane, dichloroethane, Freon 113, and methylene chloride.

Ten monitoring wells have been installed but the lateral and vertical extent of contamination has not been defined. This Order will require tasks to complete soil and groundwater investigations at the site.

6. **Adjacent Sites:** Several commercial and light industrial sites are located downgradient of the Advalloy site. These include, but may not be limited to, the Kentucky Fried Chicken (former Chevron service station) located northeast and downgradient at San Antonio Road and East Charleston Road, Sun Microsystems (part of the former Ford Aerospace Facility) located to the north and downgradient at 901 San Antonio Road, and Space Systems/Loral (part of the former Ford Aerospace Facility) located to the north and downgradient at 3825 Fabian Way. Sun Microsystems and Space Systems/Loral is regulated by Regional Board Order 93-091. Groundwater monitoring data collected and analyzed from wells at the Sun Microsystems facility (downgradient) indicate that VOCs from the Advalloy site are impacting the former Ford Aerospace Facility.
7. **Regulatory Status:** The Board adopted Order No. 90-016 (Site Cleanup Requirements) on January 17, 1990. The 1990 SCR named only Advalloy as a discharger. It required Advalloy to define the lateral and vertical extent of soil and groundwater contamination, propose and implement interim remedial actions, and propose final cleanup objectives and actions. Advalloy declared bankruptcy shortly after the Order was adopted and no tasks have been completed. The bankruptcy case was dismissed in 1994 and the property was sold to East Charleston, Inc. This Order is necessary to resume work on the site and to prevent further VOC migration.
8. **Basin Plan:** The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986, and the State Board approved it on May 21, 1987. The Board has amended the Basin Plan several times since then. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

The potential beneficial uses of groundwater underlying and adjacent to the site include:

- a. Municipal and domestic water supply
- b. Industrial process water supply
- c. Industrial service water supply
- d. Agricultural water supply

At present, there is no known use of groundwater underlying the site for the above purposes.

9. **Other Board Policies:** Board Resolution No. 88-160 strongly encourages dischargers of extracted, treated groundwater from site cleanups to reuse it or discharge it to the sanitary sewer.

Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally-high contaminant levels.

10. **State Water Board Policies:** State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Non-background cleanup levels must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in exceedence of applicable water quality objectives.

State Water Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this discharge. This order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

11. **Preliminary Cleanup Goals:** The dischargers will need to make assumptions about future cleanup standards for soil and groundwater, in order to determine the necessary extent of remedial investigation, interim remedial actions, and the draft cleanup plan. Pending the establishment of site-specific cleanup standards, the following preliminary cleanup goals should be used for these purposes:

- a. Groundwater: Applicable water quality objectives (e.g. maximum contaminant levels, or MCLs) or, in the absence of a chemical-specific objective, risk-based levels (e.g. drinking water equivalent levels).
- b. Soil: 1 mg/kg total volatile organic compounds (VOCs), 10 mg/kg total semi-volatile organic compounds (SVOCs), and background concentrations of metals.

12. **Basis for 13304 Order:** The dischargers have caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.

13. **Cost Recovery:** Pursuant to California Water Code Section 13304, the dischargers are hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action,

required by this order.

14. **CEQA:** This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.
15. **Notification:** The Board has notified the dischargers and all interested agencies and persons of its intent under California Water Code Section 13304 to prescribe site cleanup requirements for the discharge, and has provided them with an opportunity to submit their written comments.
16. **Public Hearing:** The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

**IT IS HEREBY ORDERED,** pursuant to Section 13304 of the California Water Code, that the discharger (or its agents, successors, or assigns) shall cleanup and abate the effects described in the above findings as follows:

**A. PROHIBITIONS**

1. The discharge of wastes or hazardous substances in a manner which will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited.
2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.
3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of wastes or hazardous substances are prohibited.

**B. TASKS**

**1. REMEDIAL INVESTIGATION WORKPLAN**

COMPLIANCE DATE: January 15, 1996

Submit a workplan acceptable to the Executive Officer to define the vertical and lateral extent of soil and groundwater pollution. The workplan should specify investigation methods and a proposed time schedule. Work may be phased to allow the investigation to proceed efficiently.

## **2. COMPLETION OF REMEDIAL INVESTIGATION**

COMPLIANCE DATE: November 1, 1996

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks identified in the Task 1 workplan. The technical report should define the vertical and lateral extent of pollution down to concentrations at or below typical cleanup standards for soil and groundwater.

## **3. INTERIM REMEDIAL ACTION WORKPLAN**

COMPLIANCE DATE: November 1, 1996

Submit a workplan acceptable to the Executive Officer evaluating interim remedial action alternatives and recommending one or more alternatives for implementation. The workplan should specify a proposed time schedule. Work may be phased to allow the investigation to proceed efficiently. If groundwater extraction is selected as an interim remedial action, then one task will be the completion of an NPDES permit application for discharge of extracted, treated groundwater to waters of the State.

## **4. COMPLETION OF INTERIM REMEDIAL ACTIONS**

COMPLIANCE DATE: July 1, 1997

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks identified in the Task 3 workplan. For ongoing actions, such as soil vapor extraction or groundwater extraction, the report should document start-up as opposed to completion.

## **5. PROPOSED FINAL REMEDIAL ACTIONS AND CLEANUP STANDARDS**

COMPLIANCE DATE: July 1, 1998

Submit a technical report acceptable to the Executive Officer containing:

- a. Results of the remedial investigation
- b. Evaluation of the installed interim remedial actions
- c. Feasibility study evaluating alternative final remedial actions
- d. Risk assessment for current and post-cleanup exposures
- e. Recommended final remedial actions and cleanup standards
- f. Implementation tasks and time schedule



Items b and c should include projections of cost, effectiveness, benefits, and impact on public health, welfare, and the environment of each alternative action.

Items a through c should be consistent with the guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300), CERCLA guidance documents with respect to remedial investigations and feasibility studies, Health and Safety Code Section 25356.1(c), and State Board Resolution No. 92-49 as amended ("Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304").

Items a through e should consider the preliminary cleanup goals for soil and groundwater identified in finding 11.

4. **Delayed Compliance:** If the discharger is delayed, interrupted, or prevented from meeting one or more of the completion dates specified for the above tasks, the discharger shall promptly notify the Executive Officer and the Board may consider revision to this Order.

### C. PROVISIONS

1. **No Nuisance:** The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).
2. **Good O&M:** The discharger shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.
3. **Cost Recovery:** The discharger shall be liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes raised by the discharger over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.
4. **Access to Site and Records:** In accordance with California Water Code Section 13267(c), the discharger shall permit the Board or its authorized representative:
  - a. Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this Order.

- b. Access to copy any records required to be kept under the requirements of this Order.
  - c. Inspection of any monitoring or remediation facilities installed in response to this Order.
  - d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.
5. **Self-Monitoring Program:** The discharger shall comply with the Self-Monitoring Program as attached to this Order and as may be amended by the Executive Officer.
6. **Contractor/ Consultant Qualifications:** All hydrogeologic documents (plans, specifications, and reports) shall be signed by and stamped with the seal of a California registered geologist, a California certified engineering geologist, or a California registered civil engineer.
7. **Lab Qualifications:** All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g. temperature).
8. **Document Distribution:** Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:
- a. City of Palo Alto
  - b. Santa Clara County Health Department
  - c. Santa Clara Valley Water District
9. **Reporting of Changed Owner or Operator:** The discharger shall file a technical report on any changes in site occupancy or ownership associated with the property described in this Order.
10. **Reporting of Hazardous Substance Release:** If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the discharger shall report such discharge to the Regional Board by calling (510) 286-1255 during regular office hours (Monday through Friday, 8:00 to 5:00).

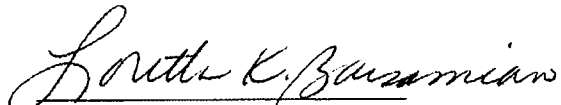
A written report shall be filed with the Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved,

duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

This reporting is in addition to reporting to the Office of Emergency Services required pursuant to the Health and Safety Code.

11. **Rescission of Existing Order:** This Order rescinds Order No. 90-016.
12. **Periodic SCR Review:** The Board will review this Order periodically and may revise it when necessary. The discharger may request revisions and upon review the Executive Officer may recommend that the Board revise these requirements.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, November 15, 1995.

  
Loretta K. Barsamian  
Executive Officer

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FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY SUBJECT YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO: IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE SECTIONS 13267 OR 13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR INJUNCTIVE RELIEF OR CIVIL OR CRIMINAL LIABILITY

=====

Attachments:     Site Map  
                     Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM FOR:

**ADVALLOY, INC.**  
and  
**EAST CHARLESTON, INC.**

for the property located at

**844 EAST CHARLESTON ROAD  
PALO ALTO  
SANTA CLARA COUNTY**

1. **Authority and Purpose:** The Board requests the technical reports required in this Self-Monitoring Program pursuant to Water Code Sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Board Order No. 95-222 (site cleanup requirements).
2. **Monitoring:** The discharger shall measure groundwater elevations quarterly in all monitoring wells, and shall collect and analyze representative samples of groundwater according to the following schedule:

Well #	Sampling Frequency	Analyses	Well #	Sampling Frequency	Analyses
MW1	Q	8010	MW6	Q	8010
MW2	Q	8010	MW7	Q	8010
MW3	Q	8010	MW8	Q	8010
MW4	Q	8010	MW1B	Q	8010
MW5	Q	8010	MW2B	Q	8010

Key: Q = Quarterly

8010 = EPA Method 8010 or equivalent

The discharger shall sample any new monitoring or extraction wells quarterly and analyze groundwater samples for the same constituents as shown in the above table. The discharger may propose changes in the above table; any proposed changes are subject to Executive Officer approval.

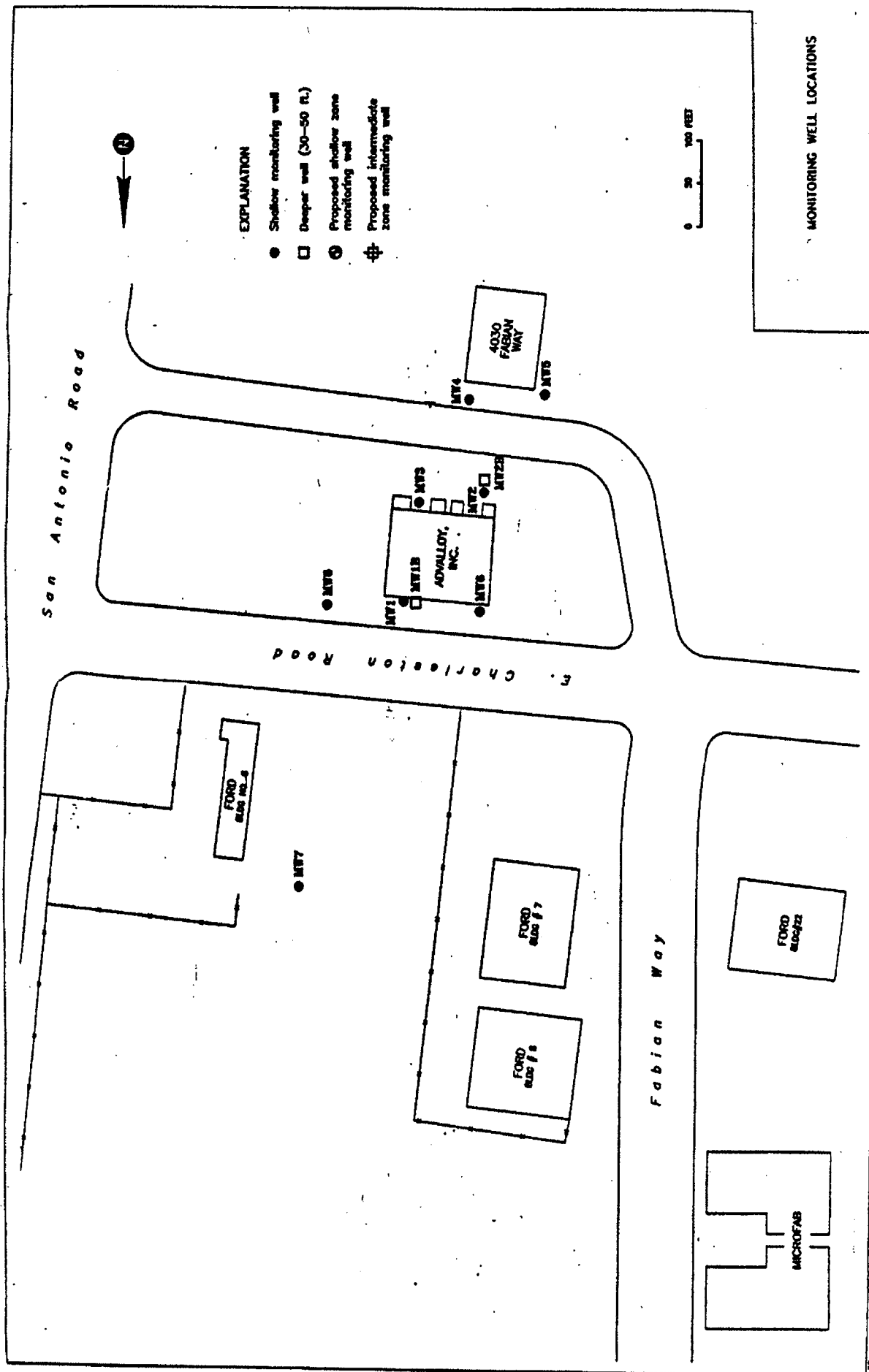
3. **Quarterly Monitoring Reports:** The discharger shall submit quarterly monitoring reports to the Board no later than 30 days following the end of the quarter (e.g. first quarter report due April 30). The first quarterly monitoring report shall be due on April 30, 1995. The reports shall include:
- a. **Transmittal Letter:** The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by the discharger's principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.
  - b. **Groundwater Elevations:** Groundwater elevation data shall be presented in tabular form, and a groundwater elevation map should be prepared for each monitored water-bearing zone. Historical groundwater elevations shall be included in the fourth quarterly report each year.
  - c. **Groundwater Analyses:** Groundwater sampling data shall be presented in tabular form, and an isoconcentration map should be prepared for one or more key contaminants for each monitored water-bearing zone, as appropriate. The report shall indicate the analytical method used and detection limits obtained for each reported constituent. Historical groundwater sampling results shall be included in the fourth quarterly report each year. The report shall describe any significant increases in contaminant concentrations since the last report, and any measures proposed to address the increases. Supporting data, such as lab data sheets, need not be included (however, see record keeping - below).
  - d. **Groundwater Extraction:** If applicable, the report shall include groundwater extraction results in tabular form, for each extraction well and for the site as a whole, expressed in gallons per minute and total groundwater volume for the quarter. The report shall also include contaminant removal results, from groundwater extraction wells and from other remediation systems (e.g. soil vapor extraction), expressed in units of chemical mass per day and mass for the quarter. Historical mass removal results shall be included in the fourth quarterly report each year.
  - e. **Status Report:** The quarterly report shall describe relevant work completed during the reporting period (e.g. site investigation, interim remedial measures) and work planned for the following quarter.
4. **Violation Reports:** If the discharger violates requirements in the Site Cleanup Requirements, then the discharger shall notify the Board office by telephone as soon as practicable once the discharger has knowledge of the violation. Board staff may, depending on violation severity, require the discharger to submit a separate technical report on the violation within five working days of telephone notification.

5. **Other Reports:** The discharger shall notify the Board prior to any site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for site investigation.
6. **Record Keeping:** The discharger or his/her agent shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination.
7. **SMP Revisions:** Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of the discharger. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self-monitoring reports relative to the benefits to be obtained from these reports.

I, Loretta K. Barsamian, Executive Officer, hereby certify that this Self-Monitoring Program was adopted by the Board on November 15, 1995.



Loretta K. Barsamian  
Executive Officer



# **EXHIBIT D.3**



California Regional Water Quality Control Board

San Francisco Bay Region

December 10, 2008

Elihu M. Harris Building

First Floor Auditorium

1515 Clay Street

Oakland, CA 94612

Item 7.

**Advalloy, Inc. East Charleston, Inc.  
and Fairchild Semiconductor Corporation  
for the property located at 844 East  
Charleston Road, Palo Alto, Santa Clara  
County - Adoption of Final Site Cleanup  
Requirements.**



**COPY**

**Item 7. Advalloy, Inc. East Charleston, Inc.**

1 **and Fairchild Semiconductor Corporation for the property**  
2 **located at 844 East Charleston Road, Palo Alto, Santa Clara**  
3 **County - Adoption of Final Site Cleanup Requirements.**

4 Chair Muller - So why don't we start, and if we  
5 feel like we are wavering a little bit, then we can break.  
6 How is that?

7 Mr. Wolfe - I note that Ray has placed the  
8 luncheons behind you to tempt you, but --

9 Chair Muller - As I say, the Vice Chair has been  
10 ripped, but she fears no hunger.

11 Mr. Wolfe - And I recognize that there are other  
12 people in the room who are probably going to get hungry,  
13 too. So as we get ready for this item, I note that there  
14 are a number of presentations, and do other presenters have  
15 their presentations loaded up, as appropriate?

16 Mr. Meillier - I believe so, yes.

17 Mr. Wolfe - So we seem to have lost our Chair.

18 Chair Muller - Some non-ex parte stuff. I was  
19 looking at those sandwiches over there. Okay, come on back  
20 here -- sorry about that.

21 Mr. Wolfe - Item 7 is considering of adoption of  
22 final site cleanup requirements for Advalloy, East  
23 Charleston, Inc., and Fairchild Semiconductor. I would like  
24 Laurent Meillier to make the staff presentation.

1                   Chair Muller - And I might just kind of touch  
2 bases. I think the way -- where did my agenda go here? The  
3 way I see it is staff, and then we will do ECI, and then  
4 Fairchild, and then others who wish to comment, if that  
5 meets everyone's approval. That gives you an idea of how it  
6 is going to go. So thank you. Please continue.

7                   Mr. Meillier - Good morning Board members. My  
8 name is Laurent Meillier. I am an engineering geologist in  
9 the Toxics Cleanup Division. I come before you today as the  
10 final site cleanup requirements for 844 East Charleston Road  
11 in Palo Alto. In this presentation, I will discuss the  
12 historical context of the site, the requirements in the  
13 revised Tentative Order, and the argument for and against  
14 naming Fairchild as a discharger to the Order. I will  
15 conclude this presentation with our recommendation to name  
16 Fairchild as a discharger on the Order.

17                   This slide shows the location of the site in  
18 yellow, near San Antonio Road, just south of Highway 101,  
19 northwest of the site, in light blue, is the former Ford  
20 Aerospace site. The groundwater plumes from the 844 East  
21 Charleston site and the Ford Aerospace site are commingled  
22 and migrate north throughout Highway 101. The Ford  
23 Aerospace site is not the subject of this Order.

24                   Fairchild relocated at this site between 1957 and  
25 1967. It conducted research and small scale production of

1 integrated circuits, and instrument manufacturing. Between  
2 1967 and 1989, Advalloy conducted precision metal stamping  
3 for the semiconductor industry. In 1994, East Charleston  
4 acquired the property in bankruptcy; today the site is used  
5 for storing furniture, and for real estate staging purposes.

6 This slide shows the drain and sewers for the  
7 sites. Liquid waste from this system flows into the cities  
8 and sanitary sewers. It is essential to note that you also  
9 are a network at the site. Fairchild discharges processed  
10 waste to the northern network at the top of the slide -- it  
11 does not look like my pointer works too well, so I will not  
12 be using that. And Advalloy discharges processed waste to  
13 the southern network. These two networks are physically  
14 separated. The fact that Advalloy discharges to the  
15 southern network and causes releases to soil and groundwater  
16 is not being contested. As we will discuss further, the  
17 sole contested issue is whether Fairchild's discharges to  
18 the northern network cause releases to soil and groundwater.

19 This slide summarizes the regulatory and cleanup  
20 history for this site. The Board adopted prior cleanup  
21 orders for this site in 1990 and 1995. These cleanup orders  
22 required investigation and a proposal for cleanup. Neither  
23 of these cleanup orders named Fairchild as a discharger.  
24 The Board considered naming Fairchild in the 1990 order, but  
25 decided not to due to lack of sufficient evidence. East

1 Charleston has been conducting cleanup at the site since  
2 1999, including groundwater extraction and treatment, and  
3 enhanced by remediation; however, final cleanup standards  
4 have not been set at the site.

5           The Tentative Order before you today sets cleanup  
6 standards and requires the discharger to continue with site  
7 cleanup work, to complete the upside investigation, to  
8 submit a five-year status report, and conduct long-term  
9 monitoring. Since the tasks of the order are not an issue,  
10 the rest of the presentation focuses on the issue of whether  
11 or not to name Fairchild as a discharger on the cleanup  
12 order.

13           This slide shows the criteria the Board should use  
14 in making its decision, to name Fairchild as a discharger,  
15 the Board must find that Fairchild caused, or permitted  
16 waste to be discharged or deposited where it is, or probably  
17 will be discharging to waters of the state. There must be  
18 substantial, credible, and reasonable evidence that  
19 Fairchild has responsibility for discharge to groundwater.  
20 State Water Board Resolution 92-49 provides example on the  
21 kind of evidence to use. The Board may use any relevant  
22 evidence, whether direct or circumstantial, such as  
23 documentation of historic or current activities, with  
24 characteristics, chemical used, storage, or disposal  
25 information. Industry-wide operational practices that

1 historically have led to dischargers such as leakage of  
2 pollutants from wastewater collection and conveyance  
3 systems, some storage tanks, landfills, and clarifiers.

4           This slide shows the evidence for naming Fairchild  
5 as a discharger in the cleanup order. Fairchild used  
6 chlorinated solvents, including TC and acid in its  
7 manufacturing processes, such that it discharged chlorinated  
8 solvents and acids to the sanitary sewer. A video of the  
9 sanitary sewer line that Fairchild discharged to shows  
10 evidence of corrosion and potential leakage points. Based  
11 on our past experience, with all the clean-up sites in the  
12 region, we know that sanitary sewer lines are prone to leak  
13 chlorinated solvents. TC is present in groundwater in the  
14 immediate vicinity of the sanitary sewer line. We will  
15 elaborate on the key points in the following slides.

16           The next slide shows again where Fairchild was  
17 discharging chlorinated solvent and acid to the northern  
18 sanitary sewer network, shown here with a solid red line in  
19 the middle of the slide, and the upper part of the slide.  
20 The red arrow points to a potential leakage in the northern  
21 sewer, as recently detected by the filming of the sewer  
22 system. The next slide shows a picture of this area. This  
23 slide shows a picture from a video taken of the sewer line  
24 that Fairchild discharged to. In August of this year, East  
25 Charleston filmed videos of the sewer lines beneath the

1 site. Because of a rotation in the video recording device,  
2 staff flipped the picture to show the bottom of the pipe in  
3 the lower part of the slide. The video appeared to show  
4 corrosion all along the sewer line that Fairchild discharged  
5 to. In the specific picture shown in this slide, you will  
6 note the denoted area, which appears to be bare soil in the  
7 roof of the pipe. This area is immediately upstream of a  
8 bend in the pipe that may have caused turbulence, that could  
9 increase corrosion in this area. Fluids may leak out of  
10 cast iron pipes at the joints, and along the pipe segment.  
11 The combination of acid and solvents in the waste stream  
12 accelerate corrosion. While it is not possible to pinpoint  
13 the exact time when the corrosion took place, staff's  
14 experience at other cleanup sites is that sewer lines that  
15 receive chlorinated solvents are often a release point for  
16 dischargers to soil and groundwater. It seems only sanitary  
17 sewage was discharged to the northern sewer after  
18 Fairchild's use; it is more likely that more of the noted  
19 corrosion occurred during Fairchild's use.

20 The next two slides show TC concentration from  
21 1999 in the A Aquifer and the B Aquifer, respectively. We  
22 present 1999 data because, after this time, EC had initiated  
23 a groundwater extraction and treatment system. The A  
24 Aquifer is between 6 and 30 feet below ground surface, and  
25 the B Aquifer is between 38 to 55 feet below ground surface.

1 This light is for the A Aquifer. The circle on the slide  
2 shown in red indicates higher concentration, purple  
3 indicates lower concentration, and blue indicates the lowest  
4 concentration. The black arrow points to the northern  
5 sanitary sewer network that Fairchild discharged to.  
6 Advalloy discharged to the southern sanitary sewer network  
7 at the bottom of the slide. Sorry about that.

8 Chair Muller - Tasha's ears are going to get blown  
9 off over there, so go easy.

10 The Reporter - Blackberry.

11 Chair Muller - Someone has a Blackberry or a  
12 mobile phone near, probably.

13 Mr. Meillier - Okay. The highest EC detection in  
14 the A Aquifer was recorded at the well located approximately  
15 50-feet west of the potential sewer line leakage area  
16 observed on the previous slide. This slide shows TC  
17 concentration from 1999 in the B Aquifer, the highest TC  
18 concentration was detected in the immediate vicinity of the  
19 potential sewer line leakage in the B Aquifer. This pattern  
20 of the highest TC concentration near the northern sewer  
21 network is still present today. The highest contaminated  
22 areas for both the A and the B Aquifers are found in the  
23 northern section of the site, closer to where Fairchild  
24 discharged.

25 Mr. McGrath - Would you leave that one up for a



1 minute?

2 Mr. Meillier - Sure.

3 Mr. McGrath - Direction of flow?

4 Mr. Meillier - Is toward the top of the slide,  
5 toward the north.

6 Mr. McGrath - Thank you.

7 Mr. Meillier - This slide summarizes Fairchild's  
8 arguments against naming it as a discharger. Fairchild's  
9 manufacturing and chemical use was on a very small scale and  
10 was not large enough to impact soil and groundwater. During  
11 the years of Fairchild's manufacturing operations, the  
12 sanitary sewer line was new, and should not have leaked.  
13 Advalloy's chemical use practices can explain all the  
14 contamination in soil and groundwater at the site. If  
15 Fairchild caused discharges to soil and groundwater from the  
16 northern sanitary sewer line, then groundwater  
17 concentrations should be higher in the A Aquifer than the B  
18 Aquifer.

19 This slide summarizes our responses to Fairchild's  
20 arguments. Fairchild's production was on a small scale  
21 level, but it was a production facility, nonetheless, and  
22 used chlorinated solvents that are now found in groundwater  
23 beneath the site. The newer sanitary sewer lines should be  
24 less susceptible to leakage. However, Fairchild's acid  
25 solvent waste stream could have caused enough corrosion for

1 leaks to occur during Fairchild's occupancy. While Advalloy  
2 did have a release of chlorinated solvent at the site, the  
3 high groundwater concentration beneath the north side of the  
4 building are more likely from Fairchild. Groundwater  
5 contamination in the B Aquifer is likely higher than in the  
6 A Aquifer because TC is heavier than water. B Aquifer  
7 groundwater concentration are higher both in the area where  
8 Advalloy discharged and where Fairchild discharged.

9           In making the recommendation to the Board, staff  
10 weighted both the argument for and against naming Fairchild  
11 as a discharger. Staff concludes that the evidence in this  
12 case is sufficient to recommend that the Board name  
13 Fairchild as a discharger. Fairchild used chlorinated  
14 solvent, including TC, it discharged TC to the sanitary  
15 sewer, TC is found in shallow groundwater beneath the sewer  
16 line; the sewer line shows corrosion, and we have  
17 experienced that sewer lines are prone to leakage.

18           The reason we changed our recommendation from 1990  
19 is that we now have two new pieces of evidence that were not  
20 available in 1990 -- the sewer view showing corrosion, and  
21 the increased experience that sewer lines are prone to leak  
22 chlorinated solvent. With this information, together with  
23 all the prior information, there is now sufficient evidence  
24 in this case for staff to recommend to the Board to name  
25 Fairchild as a discharger.

1           Before I conclude, it is appropriate to note that  
2 staff provided ample opportunities for commencing on a  
3 Tentative Order. This slide shows the multiple rounds of  
4 comments received on the Tentative Order. EC is short for  
5 East Charleston. Schlumberger is the successor-in-interest  
6 to Fairchild. The detailed response to comments is  
7 contained in Appendix C. This order was originally  
8 scheduled for the August Board meeting. Due to the  
9 extensive comments received in July, staff twice delayed  
10 this Board item. We have met at two different times with  
11 the commenting parties, and the more recent comments have  
12 focused on increasingly specific aspects of the issue of  
13 naming Fairchild.

14           Staff recommends that the Board adopts the Revised  
15 Tentative Order with Advalloy, East Charleston, and  
16 Fairchild, as named dischargers. This concludes my  
17 presentation. We are available to answer any questions.  
18 And thank you very much.

19           Chair Muller - Vice Chair Young.

20           Vice Chair Young - Yes. Can you go back to the  
21 slide, either one of the slides, regarding on-site drains  
22 and sewers?

23           Mr. Meillier - Okay.

24           Vice Chair Young - Maybe you could walk us through  
25 the things that are on the slide in the vicinity of the

1 northern sewer that are hard to discern right now? There is  
2 the yellow line with the question marks, there is an acid  
3 bath that leads to nowhere. Just tell us how all of that is  
4 organized.

5 Mr. Meillier - No problem. This map was put  
6 together by West Associates, and this map describes the  
7 sanitary sewer system for both the northern and the southern  
8 network, and another network you notice on our monitoring  
9 wells, as well as the cast iron pipe that basically moves  
10 sanitary sewer as of today, into the lateral and into the  
11 West Valley Treatment ultimately. Then there are percolated  
12 acid baths, as well, features, a drain, as well as like a  
13 black square to the right, which is also a potential sump  
14 that is per one of the blueprint that we have, and may have  
15 been found in that location during Advalloy's use, and  
16 potentially, I am not sure, Fairchild's use. Then there are  
17 like question marks in terms of -- those are like laterals  
18 that are coming in, and it is, I guess, we are not exactly  
19 sure of the location of these laterals that would fit into  
20 the cast iron pipe, and then there is a PVC dotted line that  
21 is in orange, that feeds into the sanitary system there.  
22 And the black dots are basically what we would call like in  
23 a drainage system into the sanitary sewer system.

24 Vice Chair Young - So I guess in trying to figure  
25 this out, the question -- is that acid bath drain still

1 sitting there in the room and accessible for someone to dump  
2 something in?

3 Mr. Meillier - I do not believe so.

4 Vice Chair Young - Okay. So the implication is  
5 that these other potential sources of discharge on the slide  
6 were historic, but they are no longer --

7 Mr. Meillier - Exactly. That is right.

8 Vice Chair Young - We do not know when they were  
9 de-commissioned, really?

10 Mr. Meillier - I do not have the exact date of the  
11 de-commissioning of these obvious features, that is correct.  
12 And this basically tried to summarize all the different  
13 features then that have been found at the site, in  
14 relationship with the blueprints that are available from the  
15 various firms, that held industrial activities at the  
16 property.

17 Vice Chair Young - All right, thank you very much  
18 for the additional explanation.

19 Mr. Meillier - Somewhat conjectural.

20 Vice Chair Young - Yes, okay.

21 Chair Muller - Board member McGrath.

22 Mr. McGrath - I have, I think, a quick question of  
23 Bruce. Bruce, as I see it, there are two questions here,  
24 one of which we are asked to resolve, and the other one  
25 which would not. The first question is, is there

1 substantial evidence that Fairchild could have discharged  
2 during the four year period based on that; the second  
3 question is, how do we allocate the responsibility of the  
4 groundwater pollutants among the PRP's? And we are not  
5 being asked to deal with the second one today --

6 Mr. Wolfe - On that second issue, we never take a  
7 position on that.

8 Mr. McGrath - It is just the first question, which  
9 is -- and the test is, I have it right, is there substantial  
10 evidence?

11 Mr. Wolfe - Correct. Because the two previous  
12 Orders did not name Fairchild, so this is a change from  
13 those previous Orders.

14 Chair Muller - Because of the new information.

15 Mr. Wolfe - Right, our Orders do include the cause  
16 that, should new information become available, we can  
17 consider naming additional dischargers to the Order.

18 Chair Muller - Dr. Singh.

19 Dr. Singh - I have some questions regarding naming  
20 the Fairchild again. I have been looking at the picture  
21 here. I think that the starting sewer lines, though, sewer  
22 drains, are made of cast iron that I see over there. Later  
23 on, they changed it to petrified clay pipe. Is that right?

24 Mr. Meillier - That is correct for the southern  
25 network.

1 Dr. Singh - The cast iron pipe is, I thought, was  
2 less susceptible to leakage because of the tighter fittings  
3 than would be petrified clay pipe. But you are showing a  
4 very high concentration. Will you move to one of the slides  
5 -- I just wanted to point out.

6 Mr. Wolfe - Back up one.

7 Dr. Singh - This one here.

8 Mr. Meillier - Oh, the next one, okay.

9 Dr. Singh - You see a very high concentration over  
10 there next to the cast iron pipe over there, [inaudible]  
11 potential sewer line B, and it was a new cast iron pipe. Is  
12 that right?

13 Mr. Meillier - Yeah, it is my understanding that,  
14 when Fairchild occupied the building, that cast iron pipe  
15 was new. That is correct.

16 Dr. Singh - There was some kind of activity at  
17 that point, and maybe -- but you have detected a hole in the  
18 pipe? Or something over there? Because you are showing  
19 somewhere there is a missing pipe. A missing pipe is not  
20 [inaudible], this one. This picture. What place it comes  
21 from?

22 Mr. Meillier - Yes.

23 Chair Muller - Do you understand the question?

24 Mr. Meillier - I understand the question. So what  
25 we did here was simplify, you know the site waste sewer

1 network, we did not put in the laterals as well as the PVC  
2 section of it, for simplicity purposes. And what we are  
3 showing here is the potential leakage area, the approximate  
4 using the scale that we have, of the potential leakage area  
5 that we have detected in the video. As to the other  
6 segments, you are correct, they are not drawn on that map.

7 Dr. Singh - How did you come to that conclusion,  
8 the potential leakage area?

9 Mr. Meillier - Okay, so what --

10 Dr. Singh - The slide over there, [inaudible]

11 Mr. Meillier - We did not take any samples of  
12 soils. Soil samples were not taken. What happened is that,  
13 you know, they took a video of the sewer line, and from the  
14 inspection of that video, as well as we also got this video  
15 reviewed by experts, and one of them working for the City of  
16 Albany, and he agreed with us that there was corrosion in  
17 the pipe, and from these findings, as well as the maps that  
18 we have of the sites, I derived the approximate location of  
19 that leakage area using the scale and that account we have,  
20 and I placed that black square to show the potential sewer  
21 line leakage area. That is what I did.

22 Mr. Hill - Dr. Singh, this is Stephan Hill of the  
23 Board staff, also --

24 Dr. Singh - Do you have --

25 Chair Muller - Dr. Singh, let Stephan Hill -- he



1 will give you --

2 Mr. Hill - Could I just add onto --

3 Dr. Singh - I just have -- I have not finished my  
4 question.

5 Chair Muller - Yeah, but the staff here will help  
6 answer it.

7 Mr. Hill - If you like, I can elaborate on  
8 Laurent's last answer. Part of it is that what you are  
9 looking at here are things happening in different sequence.  
10 The colored dots represent groundwater well data from 1999,  
11 the sewer video was done in 2008, and so we are taking those  
12 two sets of information and overlaying them, and so the  
13 black dot shows you where that abnormality in the pipe is  
14 located in the picture that you saw. And I guess, if there  
15 were additional information about soil in the vicinity of  
16 that location, we would add that to the pile. We do not  
17 have that information, as it turns out, is that the sewer  
18 video was relatively new. We are going with the information  
19 that we do have available to us.

20 Dr. Singh - What I was wondering, if we have any  
21 data that harm with TCP was washed down the drain by  
22 Fairchild in a quantity, and I compared to this company,  
23 Advalloy. I mean, what was the proportion up here, we do  
24 not have any data on that?

25 Mr. Meillier - Yeah, I mean, I do not have like

1 discharge data from Fairchild, you know, that precisely  
2 would give me rates of discharge during their occupancy of  
3 the building, during that decade between 1957 and 1967, the  
4 discharge, I do not have any information; neither do I have  
5 it for Advalloy. But I want to point out that Advalloy, per  
6 the record that I have, only discharged to the southern  
7 network, and did not discharge to the northern network, that  
8 processed waste.

9 Dr. Singh - And just last question. I understand  
10 the Advalloy has gone bankrupt.

11 Mr. Meillier - Yes.

12 Dr. Singh - It is still in existence, this  
13 company.

14 Mr. Meillier - Excuse me?

15 Dr. Singh - Bankrupt company?

16 Mr. Meillier - This company is not in existence  
17 any longer.

18 Dr. Singh - There is nothing there. Is that  
19 right? So a revised Tentative Order for Advalloy is just  
20 null and void, it is not effective, is that right? If their  
21 company does not exist, why do you include that company here  
22 in the recommendation?

23 Mr. Hill - This is Stephan Hill again. It is our  
24 practice, where a company still has a place to receive mail,  
25 even if it is bankrupt, for us to continue to name them, and

1 it creates sort of a chain of responsibility that moves  
2 forward. So we are not really expecting Advalloy to do work  
3 here, but as a matter of practice, we name the former  
4 companies whenever we can. And I will let Yuri elaborate on  
5 that if she thinks it is appropriate.

6 Chair Muller - Would you like to elaborate?

7 Ms. Won - Actually, I am not really sure of the  
8 specifics here, but I will say I think it is prudent  
9 practice to include the actual discharger in the Order.  
10 That is it.

11 Chair Muller - So it is has been a normal  
12 practice, to continue to follow all the way back to who was  
13 on the properties? That is my experience. Board member  
14 Hill -- Moore, Hill, it's that lunch thing.

15 Mr. Moore - No problem. Well, the way you have  
16 visually presented the information, not having all of the  
17 monitoring well data up there, and that sort of thing, it  
18 leads me to the conclusion -- or it appears that it is hard  
19 to explain that peak concentration in the northern part of  
20 the property based solely on discharges from the southern  
21 part of the property.

22 Mr. Meillier - That is correct.

23 Mr. Moore - That is what I take from your visual  
24 presentation. Is that accurate? Could you expound on that?

25 Mr. Meillier - Well, yeah. I mean, that is

1 correct. I mean, it is difficult for us to explain  
2 basically the partitioning of contamination that is  
3 prevalent in the northern network and in the northern  
4 section of the site, compared to the southern section of the  
5 site. We do know that, you know, Advalloy's discharged  
6 process was in the southern network of the site, and that  
7 they had used a sump. But we would, therefore, have  
8 concluded that there would be some amount of remaining  
9 contaminants in the southern network from that use, and we  
10 do not see that pattern. We see, you know, a pattern where  
11 most of the contamination is basically in the northern  
12 network -- residing in the northern network.

13 Mr. Moore - Thank you.

14 Chair Muller - Okay, we --

15 Ms. Won - Through the Chair?

16 Chair Muller - Yes.

17 Ms. Won - Actually, Vice Chair.

18 Vice Chair Young - Well, I had another technical  
19 question. I am trying -- I think I do not know the scale of  
20 these drawings. How big -- north to south, how big is the  
21 yellow area that denotes the building?

22 Mr. Meillier - The building is about -- I did not  
23 memorize this by heart -- I know that on that scale here,  
24 the black square to the pink square is about 50-feet away  
25 from each other.

1           Mr. Wolfe - Can you go back to slide 3? I think  
2 that shows the building relative to the city block.

3           Mr. McGrath - The scale is shown on page 15 on the  
4 next to the last page.

5           Mr. Wolfe - Right. And this one shows the  
6 neighborhood that the building there at East Charleston is  
7 relatively large compared to some of the others, but it  
8 shows the streets and the block, the area.

9           Vice Chair Young - And then the groundwater  
10 movement?

11          Mr. Meillier - It is toward the north.

12          Vice Chair Young - Is toward the north. How fast?

13          Mr. Meillier - Depending on which aquifer you are  
14 dealing with, in the A aquifer, it is about 1.25-feet, I  
15 believe, per day; and then, for the B aquifer, it is lower,  
16 it is .25 per day.

17          Vice Chair Young - Thank you.

18          Mr. Hill - Mr. Chairman, this is Stephan Hill  
19 again. Let me just add to that, that the water moves at  
20 that speed, the chemicals are retarded, so they would move  
21 at a slower rate.

22          Vice Chair Young - Thank you.

23          Ms. Won - Through the Chair? I just wanted to  
24 clarify the Board's fact-finding mission here today with  
25 respect to naming Fairchild, and so what the Board is tasked

1 with today is to determine whether the weight of the  
2 evidence that you are going to hear, that you consider in  
3 the package, supports naming Fairchild as a discharger --  
4 did they cause or permit the discharge during their  
5 operations. You do not need direct evidence, you do not  
6 need -- circumstantial evidence will do; for example, you  
7 know, did they use the solvents that are in the groundwater,  
8 or the historic industry practices at the time. And in  
9 terms of what "weight of evidence" means, it is 50 percent  
10 plus something. So if you find that the weight of evidence  
11 considering everything that you are going to hear today  
12 supports naming Fairchild, then you may.

13 Chair Muller - Okay, thank you. I have the cards  
14 and I am looking at setting the times, and I just have cards  
15 only for East Charleston. I do not have cards for other  
16 commentators. So -- oh, okay. So help me clarify that a  
17 little bit. So you are going to be also on behalf of  
18 Fairchild?

19 Mr. Wolfe - No, we will have a group for East  
20 Charleston, and I think they should complete cards.

21 Chair Muller - Yeah, you have no cards. That is  
22 my --

23 Mr. Wolfe - It is appropriate to call up East  
24 Charleston, and then follow-up representatives from  
25 Fairchild.

1           Chair Muller - Okay. So East Charleston will come  
2 first, as I said, and you are going to share about 15  
3 minutes or so.

4           Mr. Greben - That is right, Mr. Chair.

5           Chair Muller - Okay, thank you. And we will go  
6 ahead and get started with your testimony and then we will  
7 gather cards from the other interested parties.

8           Mr. Greben - Thank you, Mr. Chair. Happy holidays  
9 to you and to all the Board. Thank you for taking the time  
10 to hear this matter today.

11          Chair Muller - I might get you to speak a little  
12 louder, please.

13          Mr. Greben - Yes, I will speak into the  
14 microphone.

15          Chair Muller - We want to make sure everyone  
16 hears.

17          Mr. Greben - My name is Jan Greben. I am the  
18 attorney for East Charleston, Inc., who I will refer to as  
19 ECI today. As Mr. Meillier has covered a lot of material, I  
20 will try and not be repetitive. I apologize if I do. I am  
21 going to share my 15 minutes with Mr. Peter Krasnoff, who is  
22 sitting behind me. He is an engineer in the State of  
23 California, who has done a lot of work on sewers, and will  
24 be providing a slide projection to you, as well, which will  
25 hopefully answer some of the questions that Board members

1 have raised about the historical operations, which are in  
2 play right now. I will, with respect to the Advalloy issue  
3 address that briefly since that was raised. We believe that  
4 Advalloy should be on the order because, as Mr. Hill  
5 mentioned, they appear to not have gone out of business,  
6 even though they are in bankruptcy, and secondly, our  
7 research shows that that company may have some assets such  
8 as insurance coverage, which may still be a reason to have  
9 them on the Order, regardless of their existence, or lack  
10 thereof.

11 I want to thank the staff for the incredible  
12 amount of time they have spent on this project. As Mr.  
13 Meillier said, this has been an ongoing process for several  
14 months. We think they got it right. We think that this is  
15 a very complex technical issue, that they put the time into,  
16 and analyzed the issues in a manner that provides  
17 justification for their recommendation to the Board. ECI,  
18 my client, does not use chemicals, has been a landowner  
19 there since 1994, and is named, or has been named because  
20 they took over ownership of a property that was  
21 contaminated. They have been working cooperatively with the  
22 Regional Board in terms of delineating the site. My firm,  
23 and Mr. Krasnoff, and people working on behalf of the ECI  
24 were not involved in the 1990 deliberations before the Board  
25 at that point in time. Obviously, as I said, we share the



1 Board's recommendations -- or the staff's recommendation --  
2 that Fairchild should be named. And we think that this  
3 decision should be made in addition to what Mr. Meillier  
4 said, because of both of the additions to the law since  
5 then, as well as some factual evidence that was not in place  
6 before the Board in 1990. Mr. Meillier referenced  
7 Resolution 9249, that was not in place in 1990. As he said,  
8 that requires a review of industry practices. As Mr.  
9 Krasnoff will show in his presentation, there were practices  
10 going on from Fairchild 50 years ago at this site, for  
11 several years, in which it appears without controversy that  
12 they were using TCE and were sending TCE waste down the  
13 drain, into the so-called northern sewer, as has already  
14 been described. And I think that all of us know that  
15 disposal practices 50 years ago were -- I guess we could  
16 call them prehistoric. None of us knew that sending things  
17 down the drain was necessarily a bad thing; in fact,  
18 manufacturers of chemicals typically instructed their users  
19 to send their waste down the drain because everybody thought  
20 that was just fine. We all know now, in retrospect, it was  
21 not such a good idea. Apart from 9249, we also had specific  
22 regional board investigations of sewers that Mr. Meillier  
23 discussed, as well. One thing he did not mention is that,  
24 in 1992, the Central Valley Regional Board issued a report -  
25 - I will refer to it as the so-called Izo (phonetic) report,

1 it was authored by a staff member at the Central Board named  
2 Victor Izo, which discussed the issue of how PCE used by dry  
3 cleaners goes through sewer lines and is a big problem. We  
4 all know that is a big problem today, 16 years later. This  
5 report came out after the deliberations for the Advalloy  
6 site in 1990. And, of course, the constituent at issue here  
7 is TCE, which is a breakdown product of PCE and would have  
8 the same characteristics in terms of going through sewers.  
9 As Mr. Meillier also referenced, the Boards around the state  
10 have consistently looked at sewer issues on an increasing  
11 basis over the last few years. The same level of  
12 investigation was not done in 1990, again, because we were  
13 in the prehistoric age of investigating sewers at that point  
14 in time. So the word is that this has been a continuum.  
15 And finally, we have got the memo from William Atwater, who  
16 was Chief Counsel of the State Water Board, I am sure all of  
17 you are familiar with him, and that came out after all of  
18 this was first deliberated, and in that memo, Mr. Atwater  
19 said clearly that anybody or any entity who has disposed of  
20 chemicals and is a discharger, regardless of the amount of  
21 the chemicals, should be named in an order. That addresses  
22 Board member McGrath's comment as to the issue, as to  
23 whether or not there is any issue here as to the amount of  
24 chemicals that were being disposed of. There has been some  
25 argument made by Fairchild during this process that, well,

1 "Yeah, we did dispose of chemicals, but it was really a  
2 small amount." As the Board is aware, and due to Mr.  
3 Atwater's memo, which has remained the law over the last 15  
4 years, it does not matter how much you contributed; if you  
5 contributed, you should be named.

6 And then we move to the facts, apart from the law,  
7 which changed. And again, the Board is looking closer at  
8 sewer releases. The specific evidence we have here is the  
9 sewer video that was conducted by our consultant, Mr.  
10 Krasnoff, which he will elaborate upon. And I will state  
11 that Mr. Krasnoff has done a lot of sewer videos, he has  
12 worked on a lot of major PCE sites, he has been an expert  
13 witness for the North Coast Board, and has worked for the  
14 Department of Justice on sewer issues, and is very well  
15 qualified to discuss what he will be elaborating on today.  
16 The bottom line is that he did a sewer video a few months  
17 ago of the so-called North Sewer Line. It showed corrosion.  
18 It showed that there was leakage from the sewer and the  
19 final piece of the puzzle, which he will elaborate on, as  
20 well, is that the only company that disposed of industrial  
21 chemicals to that sewer line, without controversy in this  
22 matter, was Fairchild. And again, there would be, back to  
23 my scenario of 50 years ago, it would not have been  
24 unreasonable that Fairchild would have been disposing  
25 chemicals because it was not illegal at that time.

1 Everybody thought it was just fine. I am going to turn this  
2 over to Mr. Krasnoff for the moment, but I do want to  
3 mention one last point, which is that, as I indicated at the  
4 start of my discussion, my client is not a user of  
5 chemicals, has never used chemicals, has not contributed to  
6 this problem, but has been working diligently with the  
7 Board. In addition to naming Fairchild, we would ask the  
8 Board, as we have requested in correspondence to the staff,  
9 that our client, my client at ECI be considered to be  
10 secondarily liable in accord with the Atwater Memo from  
11 1992. Thank you.

12 Chair Muller - Thank you.

13 Mr. Krasnoff - Good afternoon, Board Chair and  
14 Board members. I am Peter Krasnoff from West Environmental.  
15 I have been retained, as Mr. Greben explained, to assist in  
16 evaluating the historical chemical use and practices, and  
17 their potential contribution to the contamination found at  
18 the subject site, 844 East Charleston. As this figure  
19 displays, this actually was -- started off as the  
20 headquarters, the founding of Fairchild Semiconductor. That  
21 is a picture of the building. It looks very much like that  
22 today. Fairchild history -- it is sort of a fascinating  
23 site because this is pretty much the birthplace of Silicon  
24 Valley, the first semiconductor chip was invented here, was  
25 manufactured here. Fairchild Semiconductor was founded in

1 1957. Eight individuals that became known as the Fairchild  
2 Eight left a competitive company called Shockley  
3 Electronics. Included among those was an individual named  
4 Gordon Moore (phonetic), who we may know from Moore's Law.  
5 He went on to become one of the Founders of Intel  
6 Corporation. Fairchild leased the property in October of  
7 1957. They did acknowledge, and we have included some  
8 documentation here with regard to the use of chemicals, as  
9 well as the discharge into this experimental new material  
10 called "PVC", Poly-vinyl chloride. And they were doing some  
11 evaluations as to its compatibility with chlorinated  
12 solvents, which I think we know today, we could have saved  
13 them a lot of time. By 1958, the facility had grown from 20  
14 to 165 staff. This is relevant because there has been a lot  
15 of question about the extent of the use of the building, and  
16 the amount of chemicals associated with the use of the  
17 building. At that point, the operations included two  
18 buildings -- the subject property and the one next door,  
19 that is mentioned in the staff report -- where they had a  
20 machine shop. That made the combined 20,000-square-feet.  
21 The existing building that we are talking about today is  
22 14,000-square-feet. During this time period, Fairchild saw  
23 this fantastic growth that was taking place, and they began  
24 construction of a much larger manufacturing facility. That  
25 is the one over on Wisman -- 545 Wisman Road, which is the

1 subject of the MEW site you may know as Middlefield L.S.  
2 Wisman Superfund site. In 1959, Fairchild grew from 165 to  
3 1,260 staff. It was during this year that they invented the  
4 first integrated circuit, and began manufacturing. The  
5 operations expanded to five buildings in this area, with a  
6 total of about 95,000-square-feet, until late in 1959, this  
7 was the manufacturing plant for Fairchild. By 1960, they  
8 had grown to seven buildings, at 160,000-square-feet. This  
9 property then became used for research and development. The  
10 new Wisman plant went into production. I point out that the  
11 chemicals that were in use here, including TCE, also show up  
12 at the Wisman plant, TCE was discovered in groundwater there  
13 in 1981, and I mentioned, that is now one of the Superfund  
14 sites. This is a commemorative plaque that was placed  
15 there. This has been identified as a California landmark.  
16 And this is included in the handouts that I provided. You  
17 can read through this. It commemorates the invention of the  
18 integrated circuit here.

19 By 1961, I mentioned, it was research and  
20 development. They occupy 2,000-square-feet. There was  
21 documented solvent used during this time period. In 1962,  
22 Fairchild moved their instrumentation division into this  
23 building. They moved this research and development facility  
24 for Fairchild Semiconductor to a new building over in  
25 Stanford Research Park; once again, TCE was discovered in

1 groundwater there, and that was in 1983.

2           These are excerpts from actual Annual Reports from  
3 Fairchild, showing their research and development. This was  
4 at the new facility in Stanford Research Park. The  
5 instrumentation division picture included here is actually  
6 from the site. This is basically from 1962 to 1967. This  
7 continued to be used by Fairchild Semiconductor. This  
8 became their instrumentation division's headquarters. They  
9 occupied three buildings in this immediate vicinity,  
10 including a total of 56,000-square-feet and 200 employees.  
11 So it still remained a fairly active facility from basically  
12 its inception in 1957 to 1967.

13           Focusing on the Fairchild chemical use, you will  
14 see these are excerpts in Fairchild Semiconductor  
15 letterhead. They started off in 1957, these eight  
16 individuals, with nitric acid, hydrofluoric acid, which we  
17 know a lot about today, TCE was one of the chemicals that  
18 they had in use. Their waste disposals, once again, were  
19 well documented in their communications, both with the  
20 building department and, in the 1990 communications with the  
21 Board. They disposed of their solvents and acids into the  
22 sanitary sewer system. They tried this above-ground PVC  
23 piping, and that would flow to the underground piping, this  
24 cast iron soil pipe under the ground. They documented that  
25 they had no solvent recovery at that time, and they

1 anticipated they were going to be able to accomplish acid  
2 neutralization by dilution. That would be very difficult,  
3 given the alkalinity of the water, and in Palo Alto, which  
4 is about 50 mg per liter, as calcium carbonate, these acids  
5 were 48 percent hydrofluoric, very strong acids relative to  
6 the ability to neutralize them with water.

7           The PVC that we talked about failed within a month  
8 or two; the relevance of this is that TC was allowed to  
9 collect and it dissolved the PVC. This was an indication  
10 that there was pretty close to DNAPL type, or pure face PCE,  
11 similar to what we find in the subsurface at the site. In  
12 their own communications, Fairchild identified that the  
13 lower portion of this PVC pipe would swell, and in time  
14 fails, and this was basically within about two months of the  
15 inception of its use. They did acknowledge and described  
16 the polyethylene was standing up to what they called "hard  
17 usage" by acids and solvents.

18           This is another lay-out, I know you were asking  
19 about some of the piping, this is the wet labs that  
20 Fairchild used in this portion here. It flowed -- this was  
21 the above-ground PVC pipe area. It joined a below ground  
22 cast iron soil pipe that flowed out to the north along that  
23 alignment there. This is another picture from the front  
24 drain building, showing its corrosion. This was our August  
25 of this year's sewer video, after reviewing the file and



1 looking at this acid discharge. And you can see along here  
2 definite evidence of corrosion. I compare that to the rear  
3 sewer. This is the one that Advalloy discharged to. I will  
4 point out that they had corroded out a sewer there, as well.  
5 This was a replacement sewer put in some time in the 1980's.  
6 They continued to use this sewer all the way until they  
7 stopped operations in, I believe 1992.

8 Vice Chair Young - Can you show the one before  
9 this one more time, quickly -- or not so quickly, I guess.

10 Mr. Krasnoff - Okay.

11 Vice Chair Young - So this is the northern one?

12 Mr. Krasnoff - This is the northern sewer.

13 Vice Chair Young - Are we looking at it upside  
14 down, or right side up?

15 Mr. Krasnoff - This on is right side up to  
16 facilitate the explanations. Getting into these relatively  
17 small pipes, we entered in through basically a clean-out  
18 that was a two-inch clean-out. So we were limited with the  
19 types of equipment we could use, but we found all along its  
20 alignment the same or worse condition. My experience, and I  
21 think Mr. Greben identified, I have been working on sewers.  
22 I started off actually in infiltration inflow studies back  
23 in the '80's. I have been doing sewer investigations and  
24 evaluations my entire professional career. This sewer is  
25 very unusual in its condition. Having looked at lots of

1 even these floor drains at dry cleaners, I have worked on  
2 dry cleaners basically from Visalia to Chico, have looked at  
3 a lot of interior floor drains. I have never seen one that  
4 looked like this before. So this was definitely indicative  
5 of something besides domestic wastewater or normal chemical  
6 use that you would see, let's say, at a dry cleaner or other  
7 industrial facility.

8 Vice Chair Young - Thank you.

9 Mr. Krasnoff - This is a plot, sort of putting the  
10 groundwater -- this is the A-Zone groundwater that we  
11 plotted up here, once again, sort of putting the sewers in  
12 perspective here. Here is the northern sewer going out  
13 there. I do point out that these were also former Fairchild  
14 locations, back-up gradient here. And also Fairchild and  
15 Advalloy used this building here. We do see evidence of  
16 contributions from the up gradient, as well, albeit they  
17 have been lower concentrations, traditionally. But they are  
18 not that different than what we are finding in the southern  
19 portion, near where it was documented that Advalloy  
20 discharged. I did want to answer one of your other  
21 questions. At about this location right here, right at the  
22 curb line, as is typical, the cast iron switches to  
23 vitrified clay pipe, that flows out to the sewer main, below  
24 East Charleston. In the rear, it is very similar, out of  
25 the sump. We do find vitrified clay pipe here, entering

1 into the sewer that goes down Fabian Way.

2 Mr. McGrath - And the green is the sanitary sewer?

3 Mr. Krasnoff - That is correct. So, in summary,  
4 we know that Fairchild used and stored TCE. That is  
5 documented. We know that they discharged TCE and acids to  
6 sewer, we have that documentation. We know the PVC pipe  
7 that was above ground was exposed to very high  
8 concentrations of TCE, given its failure in contact with  
9 this TCE. Once again, very consistent with what we find in  
10 the ground. We know that cast iron pipe was present below  
11 ground, and that acids were discharged to it. They would  
12 have corroded that pipe, the chemistry is fairly  
13 straightforward on that. We also see clear indications that  
14 the TCE, given its distribution, leaked from the sewer. We  
15 find TCE in groundwater. We find high TCE concentrations  
16 near the front of the building, along the sewer. And that  
17 is the extent of my presentation.

18 Chair Muller - Thank you. We will go ahead. You  
19 were about --

20 Mr. Moore - Just real quick. You mentioned the  
21 joint to the VCP, which in my experience with sewers, that  
22 is a potential spot; did you TV that?

23 Mr. Krasnoff - Yes, we did. We found it to be in  
24 pretty good condition. The one thing I will point out with  
25 regard to the cast iron soil pipe, traditionally they used

1 Calder couplings, which is a rubber coupling. TCE loves  
2 rubber. It is sort of like a hot knife through butter.  
3 Yeah, exactly.

4 Mr. Moore - Thank you.

5 Chair Muller - Very good. I think we will go  
6 ahead and get the next party forward, please. And I am not  
7 sure -- are you Rick? Okay, I do not know how you want to  
8 bring your team forward. Or do you want to just handle it?

9 Mr. Coffin - I put the additional people on the  
10 card because they may respond to questions, but I will be  
11 the primary speaker.

12 Chair Muller - Welcome.

13 Mr. Coffin - We pulled together -- I do not know  
14 how you want to handle this, but --

15 Chair Muller - Would you like to introduce  
16 yourself, please?

17 Mr. Coffin - Yes, I certainly will. Rick Coffin,  
18 Barg, Coffin, Lewis & Trapp, on behalf of Fairchild and  
19 Slumberjay Technology Corporation, which is a successor to  
20 some of the environmental liabilities of Fairchild. We had  
21 spoken with counsel for the Board, and put together just a  
22 summary of some excerpts from the Administrative Record,  
23 that we had requested be distributed if --

24 Ms. Won - I would recommend -- well, as to the  
25 documents that are already in the record, I have no problem

1 with distributing that, but the document that is on top of  
2 it purports to summarize the documents that are in the  
3 record and, you know, I would treat it as a late written  
4 comment; so that means, you know, it is within the Board's  
5 or the Chair's discretion to accept it or not, based on  
6 whether there is going to be time to consider it, whether it  
7 is going to prejudice anybody, whether it is a surprise,  
8 etc.

9 Mr. Coffin - It is nothing more than a summary of  
10 the underlying documents, in much the same way that the ECI  
11 has presented summaries of documents in their presentation.

12 Chair Muller - In my opinion, if it is not  
13 additionally new information, if it is just a summary of  
14 what is in the packet --

15 Ms. Won - It is up to you. I would just -- my  
16 point is that this document is not this document that  
17 purports to summarize the underlying documents, does not  
18 right now exist in the record, and there was a written  
19 comment deadline, and this is, to me, a new written  
20 material. So I would just treat it as such, and it is up to  
21 you to decide whether you want to allow it or not.

22 Chair Muller - Further comments? Legal team?

23 Ms. Dickey - Mr. Chair, you might want to ask  
24 staff whether they have had an opportunity to review the  
25 cover page to determine whether they agree that it is merely

1 a summary or not.

2 Chair Muller - Staff, any comments?

3 Mr. Hill - We only saw it this morning, but based  
4 on the cursory review, it does seem to be a summary. We  
5 just try to discourage late submittals, stuff in the  
6 presentation itself is one thing, but handouts of stuff we  
7 have not seen is what makes us nervous.

8 Chair Muller - Sure.

9 Mr. Coffin - I can also simply read this into the  
10 record as part of the presentation, if you would like.

11 Chair Muller - Well, I think from my perspective,  
12 if staff had a chance to review it, if it is just a summary,  
13 I have no problem with accepting it.

14 Mr. Coffin - All right, thank you.

15 Chair Muller - We just will not look at the  
16 summary <laughs>.

17 Mr. Eliahu - This is a summary?

18 Chair Muller - No, no, no, this is the whole  
19 document. I think just the first page is a summary. Is that  
20 correct, sir?

21 Mr. Coffin - That is correct. The first two pages  
22 are a timeline summary of the underlying documents.

23 Chair Muller - Very good. Thank you.

24 Mr. Coffin - Again, I am Rick Coffin. I am from  
25 the law firm of Barg, Coffin, Lewis & Trapp. I represent

1 Fairchild and Slumberjay Technology Corporation. The issue  
2 before you this morning on this agenda item is whether or  
3 not there is substantial, credible, and reasonable evidence  
4 that Fairchild caused or permitted discharges at 844 East  
5 Charleston. So those are the watchwords of the standard of  
6 your determination -- substantial, credible and reasonable.  
7 Those are set by State Board precedent, and that is the  
8 standard that you need to look at in terms of naming  
9 Fairchild. This Board thorough investigated Fairchild's  
10 operations at this site before issuing a Site Cleanup  
11 Requirements Order in 1990; that investigation confirmed  
12 that Fairchild's operations were very limited in scope and  
13 duration at the site, and the best evidence before you now,  
14 and the best evidence before you then, as to Fairchild's  
15 activities, came from two primary sources -- Declarations of  
16 former Fairchild employees who had in fact been at the  
17 facility during the period of chemical use at the facility,  
18 and those declarations are a part of what is summarized in  
19 the materials just handed out to you; and contemporaneous  
20 documents concerning Fairchild's use of chemicals. This  
21 evidence shows that, between October 1957 and 1961, so  
22 approximately a three to four year period, Fairchild used  
23 this building for research and development, and office  
24 space, it was not a semi-conductor manufacturing facility,  
25 it was a research and development facility for those four